BOSTON UNIVERSITY GEOMETRY AND PHYSICS SEMINAR

FERMIONIC HAMILTONIAN REDUCTION AND PERIODICITY

Theo Johnson-Freyd
Perimeter Institute for Theoretical Physics

February 1, 2016, 4:00 – 5:00pm
Math/Computer Science, Room B21
111 Cummington Street, Boston

Abstract: I will describe a "geometric" origin for the famous "Bott periodicity" Morita equivalence between Cliff(8) and $\mathbb{R}$. Specifically, I will explain that that equivalence arises from quantizing the symplectic reduction of fermionic 8-dimensional space by an action by Spin(7). The quaternions and the Lie group G_2 will also make an appearance. Time permitting, I will speculate about a similar "periodicity" equivalence of conformal field theories predicted by conjectures in homotopy theory. In the CFT version, sporadic finite simple groups play a starring role.

See http://math.bu.edu/research/geom/seminar.html or contact Lino Amorim (*lamorim@bu.edu*) or Siu Cheong Lau (*lau@math.bu.edu*) for more information.